

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:
a rotating belt for forming an image, the rotating belt having a Young's modulus; and
5 an arrangement that is attached to a portion along the rotating belt, the material having a Young's modulus that is smaller than the Young's modulus of the rotating belt.
2. The image forming apparatus according to claim 1, wherein the
10 arrangement is a protection seal that protects an edge of the rotating belt from wearing.
3. The image forming apparatus according to claim 1, wherein the
arrangement is a scale that is used to detect an amount of movement of
15 the rotating belt.
4. The image forming apparatus according the claim 3, wherein the
scale has a width and a length and includes a reflecting part and a
non-reflecting part repeatedly disposed along the length of the scale at
20 a predetermined interval.
5. The image forming apparatus according the claim 3, wherein the
scale has a width and a length and includes a magnetic part and a
non-magnetic part repeatedly disposed along the length of the scale at
25 a predetermined interval.

6. The image forming apparatus according the claim 1, wherein the Young's modulus of the rotating belt satisfies a relation:

$$T/ExL\alpha \leq 0.03 \text{ [millimeter]}$$

5 where, T is a tension applied to the rotating belt in [N/mm²], E is the Young's modulus of the rotating belt in [megapascals], L is a maximum image length in [millimeter], and α is a percentage fluctuation in the Young's modulus.

10 7. The image forming apparatus according to claim 3, further comprising:

a driving unit that drives the rotating belt;

a reading unit that reads the scale; and

15 a control unit that controls the driving unit based on a result of reading of the scale by the reading unit.

8. The image forming apparatus according to claim 1, wherein the arrangement is a stopper, which prevents the rotating belt from biasing toward an edge side at the time of being driven.

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9. An image forming apparatus comprising:

a rotating belt for conveying a medium on which an image is directly transferred, the rotating belt having a Young's modulus; and

25 an arrangement that is attached to a portion along the rotating belt, the material having a Young's modulus that is smaller than the

Young's modulus of the rotating belt.

10. The image forming apparatus according to claim 9, wherein the arrangement is a protection seal that protects an edge of the rotating
5 belt from wearing.

11. The image forming apparatus according to claim 9, wherein the arrangement is a scale that is used to detect an amount of movement of the rotating belt.

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12. The image forming apparatus according the claim 11, wherein the scale has a width and a length and includes a reflecting part and a non-reflecting part repeatedly disposed along the length of the scale at a predetermined interval.

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13. The image forming apparatus according the claim 11, wherein the scale has a width and a length and includes a magnetic part and a non-magnetic part repeatedly disposed along the length of the scale at a predetermined interval.

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14. The image forming apparatus according the claim 9, wherein the Young's modulus of the rotating belt satisfies a relation:

$$T/ExL\alpha \leq 0.03 \text{ [millimeter]}$$

where, T is a tension applied to the rotating belt in [N/mm²], E is the
25 Young's modulus of the rotating belt in [megapascals], L is a maximum

image length in [millimeter], and α is a percentage fluctuation in the Young's modulus.

15. The image forming apparatus according to claim 11, further
5 comprising:

a driving unit that drives the rotating belt;

a reading unit that reads the scale; and

a timing control unit that controls a start timing of an image
forming operation based on a result of reading of the reading unit.

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16. The image forming apparatus according to claim 9, wherein the
arrangement is a stopper, which prevents the rotating belt from biasing
toward an edge side at the time of being driven.